Michigan Technological University

College of Computing

Computer Science Department

CS3141 Team Software Project

Spring 2022

Team Software Project proposal

Section: R01

Team #: 7

Roll#	Student name	position
30	Colton Sitts	Scrum master
31	Tristan Sorenson	Developer
32	Jacob Suiter	Developer
29	Emilie Rummer	Developer
1	Laura Albrant	Management
5	Ben Cauley	Management

Project name/title: Laundry Tracker Lite

Instructor name: Serein AL-Ratrout

Our project will be designing a web app for keeping track of laundry machines in the dorms on MTU's campus. We will be designing the frontend and backend with some chosen frameworks, which will require us to learn new tools. We felt it could be a useful tool to help students at MTU be more efficient with their time with their laundry.

➢ Problem statement

We want to create a website to keep track of which MTU laundry machines are running/available at any given time. The problem we want to solve is that there is currently no way to know which laundry machines are available without physically walking to the laundry rooms. There is also no way to alert someone who has left their laundry in the machine after it is done. This wastes the time and energy of all dorm residents. Many students have busy schedules and do not have time to continuously check if a washer or dryer is available, which can lead to not having an opportunity to do laundry. Another problem is that there is no way to notify people who have left their clothes in a machine for long periods of time after it has finished running. There are a limited number of machines and not only does it take the people who left their clothes longer to do their laundry but it also means other residents do not get an opportunity to use a washer or dryer.

➢ Proposed solution:

We are going to solve this issue with the development of a website application and database that will catalog each of the washing machines and dryers across campus, letting students check into them on arrival, which will start a timer to remind them to come back once the laundry is done, at the same time, this information will be able to be seen by every other user, allowing them to check and see which machines are occupied and when they should be free; allowing them to better plan their laundry trips. As it is used more and more, it will be able to determine which machines are used the most, and which are most likely to be free at specific times in the day thanks to the information it gathered on previous uses.

➢ Tools:

We need to develop both the client and server side of this project. This will require several frameworks used to simplify the process of creating complicated applications that we don't have a lot of initial experience with. We intend to use frameworks to soften the learning curve, here are some examples:

- ReactJS or Bootstrap: front end development
- ExpressJS or NodeJS (PHP??): backend frameworks
- MySQL (PHP??): databases

➢ Constraints and challenges:

We are unsure if we will have enough time for this project. We will need to learn some new tools, but they shouldn't be too hard to grasp. Other than that our team is motivated and prepared to put in the work. We have a good idea of how to tackle this.

➢ The expertise of the Team Members

All team members are familiar with Java and some of us are familiar with HTML/CSS. But we will need to learn some new tools for the project.

References

[1] Dean McPherson, "A Jumbo List of 51 Great Web Development Tools", *Paperform*. Available: https://paperform.co/blog/web-development-tools/. 9/19/22

[2] Jessica Clark, "Top 10 backend frameworks | Which is the best option for you?", *back4app*. Available: https://blog.back4app.com/backend-frameworks/#ASPNET_Core_Advantages. 9/19/22